



SCHOOLS' FIRST AND FOREVER RESPONDERS

PREPARING AND SUPPORTING TEACHERS IN THE TIME OF COVID-19

Authors

Cara Jackson

Carol Keirstead

Schools' First and Forever Responders: Preparing and Supporting Teachers in the Time of COVID-19

The National Comprehensive Center

The National Comprehensive Center (NC) is one of 20 technical assistance centers supported under the U.S. Department of Education's Comprehensive Centers program from 2019 to 2024. The NC focuses on helping the 19 Regional Comprehensive Centers and state, regional, and local education agencies throughout the country to meet the daunting challenge of improving student performance with equitable resources.

This publication is in the public domain. While permission to reprint is not necessary, reproductions should be cited as:

Jackson, C., and Keirstead, C. (2020). *Schools' first and forever responders: Preparing and supporting teachers in the time of COVID-19*. Rockville, MD: National Comprehensive Center at Westat.

The contents of this publication were developed under a grant from the Department of Education. However, the contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal government.

A copy of this publication can be downloaded from <https://www.compcenternetwork.org/>.



Executive Summary

COVID-19 has created a sudden demand for teachers who can provide effective remote learning opportunities for students and, simultaneously, has disrupted the preparation for the next generation of teaching. Because teachers are the most vital in-school education resource, supporting the teacher workforce through the disruptions created by COVID-19 is essential to ensure continuity of learning for students. Given that projections of significant learning loss resulting from COVID-19 (Kuhfeld et al, 2020) may be exacerbated by the number of students who do not have access to online learning (USAFacts, 2020), addressing the learning gaps students will have upon return to school will require strategic use of instructional staff. As schools and districts rush to meet immediate workforce needs, longer term planning is critical in light of looming budget declines.

This brief, aimed at state and district policymakers, elevates considerations for evidence-based strategies and innovative approaches to support teachers and teacher candidates during and following the COVID-19 crisis. We identify how CARES Act funding can be used to accelerate the development and provision of systems of support for teacher candidates and novice teachers. For each of the considerations, we cite research or examples from other states and districts that can be helpful to learn more and guide decision-making. Finally, throughout the document we provide references and links to resources that may be helpful to prepare and support teachers through and beyond this crisis, and a list of these resources is included in a table at the end of the document.

The Problem

As a result of the economic crisis caused by the COVID-19 pandemic, states and districts may be facing large budget shortfalls and reductions in force (Griffith, 2020). In developing plans for the deployment of teaching staff, they will face difficult human resources decisions while being constrained by existing teacher workforce policies, such as (1) commitments for multi-year pay raises, (2) step/column pay structure, (3) one-size-fits-all school staffing, (4) seniority-based layoff policies, and (5) inflexible pension/retirement commitments (Roza, 2020). In this context, states and districts need to be strategic in making resource allocations.

In the midst of all of the uncertainty faced by state and district education systems, supporting teachers in their efforts to meet students' needs remains crucial. Teachers are the most important resource that schools have to produce desired student outcomes (Chetty et al, 2014; Rivkin et al., 2005). Providing support and additional capacity to both incoming and in-service teachers will be essential to address students' social-emotional and academic needs, both of which have been exacerbated by the disruptions caused by the COVID-19 crisis.

Even before the current health and economic crisis, states and districts faced challenges in supporting new teachers who are typically less effective than more experienced teachers (Rice, 2013). In the current climate, new teachers may be especially disadvantaged as certain aspects of their preparation may have been curtailed. The extent to which systems are able to continue to



support rising and newly trained teachers will shape the longer-term sustainability of high-quality education.

Perhaps the most pressing and prevalent problem in this time of school closure has been ensuring that all teachers are equipped to support continuity of learning and provide equitable learning opportunities for all students. The ability of states and districts to shift to virtual schooling has varied widely, and many teachers have been unprepared to design and provide effective online learning for students (Rauf, 2020).

“The need for this type of training is going to be ongoing for the foreseeable future,” said an education tech specialist for the Atlanta Public Schools, a district of about 55,000 students.

—EdWeek, April 29, 2020. *How Districts Are Helping Teachers Get Better at Tech Under Coronavirus.*

Preliminary estimates on learning loss, show that some students could return in the fall with less than 50 percent of the typical learning gains. In some grades, the decline could put them a full year behind what would be expected under normal conditions (Kuhfield et al., 2020). In addition, teachers will need to be prepared to address wider-than-usual variation in achievement stemming from inequitable access to online learning opportunities.

Opportunities Presented by/From the CARES Act

- » **The Coronavirus Aid, Relief, and Economic Security (CARES) Act (H.R. 748), signed into law** March 27, includes \$13.2 billion aimed at K-12 schools in the Elementary and Secondary School Emergency Relief Fund. The Act also includes \$3 billion in the Governor’s Education Relief Fund, which governors can use at their discretion to provide emergency support grants to K-12 schools.
- » These stimulus funds offer the opportunity to build on evidence-based practices for supporting teachers. Districts can use CARES funds for any activity authorized by the Elementary and Secondary Education Act of 1965, including developing **instructional coaching and mentoring**, evidence-based **induction and mentoring** programs, and efforts to **train educators to effectively integrate technology** into curricula and instruction.
- » Evidence indicates that the schools most significantly impacted by the COVID-19 closures tend to be low-income schools. Such schools are experiencing significant “truancy” and teachers are far less able to reach all students (Herold, 2020), despite using a wide range of communications tools. The CARES Act provides opportunity to direct funds to support effective teaching and learning in districts and schools in greatest need.



Policy Context: COVID-19 Crisis and Changes in State Policies

Disruptions due to COVID-19 have prompted states to issue guidelines that impact the teacher workforce in a variety of ways. Guidance and recommendations issued by State Education Agencies (SEAs) to support remote learning (Reich, et al., 2020) will affect the entire teacher workforce. Many recommendations, such as offering additional summer school, extended learning time in the fall, or revised courses of study for the 2020-2021 academic year, have significant staffing implications.

In addition, new teachers will be impacted by revised guidance around initial licensure and certification, clinical experiences, hiring and induction, and state standards and other program requirements (AACTE, 2020). Social distancing measures impacting PK-12 districts and universities across the nation limit deep, authentic, and job-embedded clinical experiences essential to teacher candidates' preparation (US Prep, 2020). These policy changes, made in response to the crisis, may result in a cohort of new teachers with less experience and preparation to enter the classroom than previous incoming teachers.

Provisions of the CARES Act (see sidebar on previous page) make clear that its primary goals are to ensure continuity of learning for students and teachers. Districts will need guidance from states in determining the most effective use of CARES Act funds to ensure that new and experienced teachers are supported in serving the critical needs of students emerging from the disruption of schooling. The emergency support provided to states and districts by the CARES Act will require planning for both immediate and longer-term actions simultaneously. The degree to which states and districts respond with informed, deliberate, and innovative thinking will determine the success of this stimulus in achieving the intended goals.

Here we offer a set of considerations for states and districts as they form policy and guidance for the use of CARES Act and other funds to ensure teachers are equipped to provide high-quality instruction and support to all students, and particularly those for whom school closures have meant significant disruption in learning. We highlight six considerations to address immediate and longer-term needs by focusing on supporting an effective teacher workforce.

Considerations for States and Districts

- » Leverage funding to ensure highest need schools have the teacher talent they need.
- » Acknowledge and support social-emotional needs of teachers.
- » Seek additional instructional supports through partnerships with teacher preparation programs.
- » Develop capacity for high-quality online teaching and learning
- » Plan with the future in mind.
- » Plan for assessing the efficacy of strategies and programs.



Leverage funding to ensure that the highest need schools have the teacher talent they need.

The ability of states and districts to effectively address student learning needs largely rests on the ability of teachers to meet those needs. Funds being provided to support virtual learning as well as specific learning needs in a state could be directed to supporting staffing models and teaching training, coaching, and support needed to enact high-quality learning opportunities. States can encourage districts to use CARES Act and other funding sources to bolster staffing and increase teacher capacity to address learning gaps and ensure continuity of learning for students with the greatest need.

Acknowledge and support social-emotional needs of teachers.

Teachers are facing professional challenges as they work to reach all students through virtual technologies, which results in increased workloads. Teachers may also be facing personal challenges, including health concerns and care for family. The importance of self-care cannot be overstated in a crisis such as a pandemic and attention to the signs and systems of support will be required to ensure teachers are able to support students and their families, all of whom have experienced some level of stress and in some cases, significant trauma.

States can incentivize and support districts in providing social-emotional support for teachers and other school staff through district and school-based efforts and through partnerships with mental health and social service agencies. The National Center to Improve Social & Emotional Learning and School Safety hosted a [webinar](#) with practical information and guidance backed by research to help school staff cope with the stresses of school closures, service provision, and quarantine due to the COVID-19 pandemic. See references to The Center for Great Teachers and Leaders' [stress spectrum](#) and [self-assessment and planning tool](#) with key strategies for fostering resilience.

Seek additional instructional supports through partnerships with teacher preparation programs.

Partnering with teacher preparation programs can help meet the critical instructional talent needs that districts will face as students re-enter school, while providing valuable on-the-job training. In addition to playing a key role in preparing teacher candidates through high-quality online coursework and clinical practice, teacher preparation programs are logical partners to bring to the table in planning to provide students with continuity of learning and address learning gaps that will emerge from time away from schools. Evidence suggests there will be widespread gaps in achievement when students return to school following the disruptions caused by COVID-19 (Kuhfeld et al., 2020). States can incentivize districts and teacher preparation programs to engage teacher candidates and incoming teachers in summer school programs, reach out to disengaged students, conduct diagnostic assessments, or provide tutoring or other remedial instructional supports, and staff after-school programs.



States and districts must plan for various scenarios including significantly reduced class sizes, the necessity to conduct all school activities in small groups, and staggered or alternate schedules. New ways of schooling can be supported by equipping prospective teacher candidates as vital assets and engaging more experienced teachers in new roles such as supporting online learning for larger groups of students, and taking on instructional leadership needed for new school configurations.

Develop capacity for high-quality online teaching and learning.

Support ongoing professional development.

It is becoming increasingly clear that online learning for students will continue to be an essential educational service delivery strategy given the need for social distancing and the safety of students for whom a return to school buildings would put them or their family members at risk. The need to pivot so quickly to online learning upon school closures necessitated by COVID-19 has illuminated the range in capacity of teachers to provide high quality learning through online engagement. Although there is limited rigorous research on the effectiveness of professional development to support effective virtual or blended teaching (Lawless & Pelligrino, 2007), several organizations have developed resources for designing and providing support for online teaching and learning. For example, the [National Standards for Quality Online Teaching](#) sets standards and related indicators for high-quality online teaching to inform the design of professional development and online teacher certification programs.

The field can learn from the work that many districts have done to support professional development for teachers and provide high quality resources for remote learning. For example, San Francisco Unified School district has compiled resources for digital learning that includes a series of webinars focused on continuity of learning, setting norms in online environments and Google classroom, and building out student creation tools to leverage online learning. Miami-Dade Public Schools has an instructional continuity plan to clarify the roles of students, teachers, and families relative to distance learning and offers options for content delivery. Other district efforts to help teachers adapt to teaching online were highlighted in an EdWeek article (Rauf, 2020).

Though not specifically about professional development, there are numerous research-informed resources for supporting online teaching quality. The Comprehensive Center Network has compiled [resources](#) for continuity of learning, searchable by topic and by audience. [PowerUp What Works](#) offers resources, strategies, and practical tips to personalize instruction with technology to meet the needs of struggling students. The Online Learning Research Center has produced an [Online Course Quality Rubric](#), which is based on theories and emerging empirical evidence about how to optimize design features and instructional practices for online learning.

Expand and prepare a cadre of staff to support online learning.

SEAs can encourage districts and teacher preparation programs (through CARES Act Higher Education funds) to engage teacher candidates in supporting teachers with online instruction through virtual co-teaching or by pairing new and experienced teachers for similar support. Some



states are allowing non-traditional instruction, including distance learning lessons, to count for teacher candidates' clinical experiences (Saenz-Armstrong, 2020).

Teacher candidates and new teachers may have more experience with online platforms and the skills to navigate virtual environments. Pascarella (2020) suggests leveraging student teachers' digital learning experience by inviting them to co-plan digital learning tasks and online lessons, making them a co-host of virtual meetings, and giving them opportunities to lead. Some districts rely on tech coaches and librarians to help teachers with digital training (Rauf, 2020). An additional educator can offer technical assistance during live sessions and support small group discussions and other live session activities. In addition to the educational benefits of having more than one educator in a live session, pairing up can help to share the burden of heightened security procedures that have proven necessary in virtual environments.

Promote and enact teacher leadership opportunities.

The response to the COVID-19 crisis will provide many opportunities for formal and informal teacher leadership. School districts may be able to support teachers using distance learning options by developing teacher-led rapid response teams to assist other teachers with the elements of distance learning. Master teachers can be responsible for providing whole-group direct instruction to larger groups of students, while other teachers can work with smaller groups to address specific needs.

“During a crisis, leaders must relinquish the belief that a top-down response will engender stability. Leaders can better mobilize their organizations by setting clear priorities for the response and empowering others to discover and implement solutions that serve those priorities.”

(D'Auria & DeSmet, 2020)

To promote rapid problem solving and execution under high stress and chaotic conditions, school district leaders can organize a network of teacher-led teams to support distance learning for other teachers in their school district. Some examples include having “tech savvy” teachers act as liaisons between the district's technology coaches and its teachers (Rauf, 2020). For example, at a middle school in North Carolina, one of the more digitally advanced educators served as an informal liaison between the district's technology coaches and its teachers, vetting new tech tools for educators and providing guidance on how to use these tools, drawing on personal experience.

Plan with the future in mind.

While states and districts are planning to address immediate needs as they begin to make use of CARES Act funds, it is essential to also plan for future needs. Given the anticipated decline in state budgets, strategies that support the teacher workforce in the long run may mitigate some of the



challenges associated with reduced financial support for education. The need for effective teachers will not dissipate, regardless of the new education landscape. States can use CARES Act funds to encourage implementation of evidence-informed supports and incentivize innovative strategies that may be necessary for new realities.

Provide high-quality clinical experiences.

While social distancing measures may curtail the length of student teaching, Ronfeldt and Reininger (2012) found that the duration of student teaching has little effect on teacher outcomes, but the *quality* of student teaching has significant and positive effects. Moreover, the magnitude of the effects of perceived quality of student teaching placement were greater when the student teaching period is shorter (which may be relevant in the current context) and in schools with more historically underserved racial groups (that is, the quality of student teaching was more impactful for teachers who end up teaching disadvantaged students). Teacher candidates who complete their field placement schools with higher stay ratios (i.e., higher proportions of teachers who stay in the school over time) were more effective when they become teachers of record (Ronfeldt, 2012). States can leverage their policies to support field placements in schools that would be most beneficial for students and student teachers alike.

To maximize the effectiveness of teacher preparation, states can provide incentives and guidance for districts to identify the most effective teachers to partner with for student teaching, whether in virtual or face-to-face environments. Attending to the instructional effectiveness of the cooperating teacher (the teacher of record that the teacher candidate works with) can improve outcomes for both the teacher candidates and their future students. Ronfeldt et al. (2018) found that preservice teachers were more instructionally effective (as measured by observational ratings and value-added to students' achievement) when they had completed student teaching with more instructionally effective cooperating teachers.

Rather than waive teacher preparation requirements, states could encourage teacher preparation programs to make use of online resources to support teacher candidates' developing skills. The University of Michigan's *TeachingWorks* houses a repository of [videos of high-leverage teaching practices](#) and resources on [how to use videos](#) to practice teaching. The Collaboration for Effective Educator Development, Accountability, and Reform (CEEDAR) center features a high leverage practice video series specific to [special education](#). US Prep has produced a list of [resources](#) to help teacher preparation programs shift the clinical experience (i.e. student teaching) using virtual formats.

Teacher preparation programs can increase the instructional skills of new teachers by using teaching simulations paired with various coaching conditions. Cohen et al. (2020) found that preservice teachers who completed teaching simulations paired with coaching sessions experienced large improvements in skills relative to those who only reflected on their teaching. Preservice teachers who received coaching were also less harsh in their assessments of student avatars exhibiting off-task behaviors, and were less likely to endorse punitive steps to remediate



avatar behaviors. The authors concluded that skills that teachers need to learn, and that they often struggle with when they enter the classroom, do not have to be learned “on the job.”

Colleges of education are increasingly venturing into the use of virtual reality—student avatars—in preparing teacher candidates for the “real” world of teaching. Such approaches can be especially valuable in preparing teachers to work with students with special needs or in developing teacher candidates’ cultural competence. The University of Central Florida’s [TeachLive](#) was one of the earliest innovations in the use of student avatars for teacher preparation. The Massachusetts Department of Elementary and Secondary Education (DESE) is working with a virtual reality company to design and embed [virtual simulations](#) into coursework in 18 educator preparation programs across the state. The virtual simulations include avatars for a child with Autism Spectrum Disorder, a middle school student with a learning disability, an English learner, and parent. As with other innovative practices, collecting and acting on evidence on effectiveness of such approaches will be essential to ensure that funds are used in ways that maximize teacher and student outcomes (see next consideration).

Provide multi-year comprehensive induction and mentoring for new teachers.

Many states have policies supporting the use of induction and mentoring as a critical support for new teachers. While states and districts may be tempted to forgo such programs in times of budget cutbacks, the long-term risks may outweigh the short-term benefits. There is some evidence that multiple years of teacher induction yields benefits for student achievement (Ingersoll & Strong, 2011). In a study that compared urban elementary schools with either comprehensive teacher induction or the district’s usual, less comprehensive induction services, researchers found that 2 years of comprehensive induction improved student achievement (Glazerman et al., 2010). For teachers who received 1 year of comprehensive induction, however, the researchers did not find an impact on student achievement.

In general, the kinds and amounts of support greatly vary across induction programs, and research suggests that the effects depend on how much induction one gets and for how long (Ingersoll and Strong, 2011). The [Delaware Department of Education](#) supports a 4-year comprehensive induction program to provide new educators with the supports necessary to become familiar with school and district policies, hone their professional skills, evaluate and reflect on their own professional performance, and develop an individualized growth plan to improve their effectiveness.

Support instructional coaching, including virtual coaching.

Over recent years, the use of instructional coaching to support the use of effective teaching practices has gained prominence. For example, Florida’s *Just Read* statewide reading initiative, which included full-time site-based reading coaches, showed a significant association with improved teaching and higher student achievement (Marsh et al., 2009). In a meta-analysis that combined 60 studies of instructional coaching, Kraft, Blazar, and Hogan (2018) found that instructional coaching improved instructional practice and student achievement. Additional research suggests that aligning instructional coaching with teacher evaluation systems can support



the effective implementation of instructional reforms (Woulfin & Rigby, 2017). As states and districts look to staffing models required to support high-quality teaching in online, blended, and extended learning environments, coaches can support teachers in using effective and evidence-based strategies as well as support effective use of digital technologies.

While it is unclear whether the findings of the Kraft et al. (2018) meta-analysis on instructional coaching would apply to a situation in which instructional coaching is conducted virtually, at least one study provides promising evidence in that regard. In an experimental study of a web-mediated approach called *MyTeachingPartner-Secondary*, researchers found that the intervention produced substantial gains in measured student achievement in the year following its completion (Allen et al., 2011). Literature on improving instructional coaching in early childhood education (O'Keefe, 2017) noted the evidence behind *MyTeachingPartner* as among the most promising for virtual coaching, including evidence of impacts on teacher practice when delivered at scale by practitioners, rather than the model developers (Early et al., 2017).

Plan for assessing the efficacy of strategies and programs.

While federal education law encourages the use of evidence-based practices, schooling in the era of COVID-19 demands a great deal of innovation. By virtue of being new and untested, such innovative strategies have little evidence to support them. It will be critically important for districts to determine strategies that most effectively and efficiently support the teacher workforce in achieving intended outcomes. States and districts should consider what information they can gather quickly to assess whether these innovative strategies are on track, or if mid-course corrections are needed.

As a first step, SEAs could collect evidence about the use of different strategies and the extent to which these strategies enable teachers to support continuous learning. States should provide that information to districts and encourage districts to use this evidence in making decisions and allocating resources. States will want to continue to monitor trends in their teacher workforce and determine the differences in student outcomes based on staffing models and approaches. The [Regional Education Laboratories Program](#) is a source of both high-quality information and technical assistance related to evaluating the effectiveness of educational initiatives, including partnerships and publications on the [teacher workforce](#).





Resources

Title	Description/Use	Source with link
Topic: Supporting Teacher Candidates		
Using videos to practice teaching	For preservice instructors to incorporate videos in practice teaching	University of Michigan https://library.teachingworks.org/curriculum-resources/pedagogies/using-video-to-practice-practice/
High-leverage practices in special education	Practice Guide and videos for teaching students with special needs	Collaboration for Effective Educator Development, Accountability, and Reform (CEEDAR) https://ceedar.education.ufl.edu/high-leverage-practices/
Shifting the Clinical Experience Using Virtual Formats	List of resources to support pre-service clinical instructors to use virtual formats	US Prep https://docs.google.com/document/d/1VRP8V48m vipufRiPGnqqeqNNxcjUd33jwUXKI8RvISQ/edit#
TeachingWorks Resource Library	Resources for engaging teacher candidates in learning evidence-based instructional practices	University of Michigan https://library.teachingworks.org/
Topic: Supporting Teachers with Online Learning		
National Standards for Quality Online Teaching	Eight standards for effective online teaching to use in designing professional development, supporting, and evaluating teachers.	Virtual Learning Leadership Alliance National Standards for Quality https://www.nsgol.org/wp-content/uploads/2019/02/National-Standards-for-Quality-Online-Teaching.pdf
PowerUp What Works	Resources, strategies, and practical tips to personalize instruction with evidence-based strategies and accessible technology to meet the needs of diverse learners.	American Institutes for Research https://powerupwhatworks.org/



Title	Description/Use	Source with link
Online Learning Quality Rubric: A Toolbox	Rubric based on three concepts that theories and emerging empirical evidence suggest are critical to addressing the unique challenges of online learning	Online Learning Research Center at University of California-Irvine https://www.olrc.us/blog/online-course-quality-rubric-a-tool-box
Resources for Continuity of Learning	Resources for continuity of learning, searchable by topic and by audience	Comprehensive Center Network https://www.compcenternetwork.org/resources-for-continuity-of-learning
Topic: Supporting Social Emotional Well-Being		
Strategies for Districts to Support Self-Care for Educators During the COVID-19 Pandemic	Webinar with information and guidance to help school staff cope with the stresses of school closures, service provision, and quarantine due to the COVID-19 pandemic	REL West, the Region 15 Comprehensive Center, & the National Center to Improve Social & Emotional Learning and School Safety https://compcenternetwork.org/news-events/events/5854/wested-webinar-strategies-districts-support-self-care-educators-during
The Educator Context and Stress Spectrum	A tool to support teachers and principals in gaining a greater awareness of how their current personal and professional context affects their levels of stress in the time of COVID-19	Center for Great Teachers & Leaders https://gtlcenter.org/sites/default/files/Stress_Spectrum.pdf
Educator Resilience and Trauma-Informed Self Care	Self-assessment and planning tool with strategies to foster resilience	Center for Great Teachers & Leaders https://gtlcenter.org/sites/default/files/Educator-Resilience-Trauma-Informed-Self-Care-Self-Assessment.pdf



References

- ACTE. (2020). Educator Preparation Community Coronavirus (COVID-19) Response. Retrieved from <https://aacte.org/resources/covid-19-resources/>
- Allen, J. P., Pianta, R. C., Gregory, A., Mikami, A. Y., & Lun, J. (2011). An Interaction-Based Approach to Enhancing Secondary School Instruction and Student Achievement. *Science*, 333(6045), 1034–1037.
- Chetty, R., Friedman, J. N., & Rockoff, J. E. (2014). Measuring the Impacts of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood. *American Economic Review*, 104(9), 2633–2679. Retrieved from <https://doi.org/10.1257/aer.104.9.2633>
- Cohen, J., Wong, V., Krishnamachari, A., & Berlin, R. (2020). Teacher Coaching in a Simulated Environment. *Educational Evaluation and Policy Analysis*. <https://doi.org/10.3102/0162373720906217>
- D'Auria, G., & DeSmet, A. (2020). Leadership in a Crisis: Responding to Coronavirus. *McKinsey & Company*. Retrieved from <https://www.mckinsey.com/business-functions/organization/our-insights/leadership-in-a-crisis-responding-to-the-coronavirus-outbreak-and-future-challenges>
- Early, D. M., Maxwell, K., Ponder, B., & Pan, Y. (2017). Improving Teacher-Child Interactions: A Randomized Controlled Trial of Making the Most of Classroom Interactions and My Teaching Partner Professional Development Models, *Early Childhood Research Quarterly*, 38(1), 57-70.
- Glazerman, S., Isenberg, E., Dolfin, S., Bleeker, M., Johnson, A., Grider, M., & Jacobus, M. (2010). *Impacts of Comprehensive Teacher Induction: Final Results from a Randomized Controlled Study*. Mathematica Policy Research. Retrieved from <https://ideas.repec.org/p/mpr/mprres/691d9603eb074051b57684e4affae4d4.html>
- Griffith, M. (2020, April 30). *The Impact of the COVID-19 Recession on Teaching Positions*. Learning in the Time of COVID Blog Series. Palo Alto, CA: Learning Policy Institute. Retrieved from <https://learningpolicyinstitute.org/blog/impact-covid-19-recession-teaching-positions>
- Herold, B. (2020, April 10). The Disparities in Remote Learning Under Coronavirus (in Charts). *Education Week*. Retrieved from <https://www.edweek.org/ew/articles/2020/04/10/the-disparities-in-remote-learning-under-coronavirus.html?cmp=eml-enl-eu-news2&M=59369645&U=56765&UUID=eb9063a251a19af76d00b3069f4a4723>
- Ingersoll, R., & Strong, M. (2011). The Impact of Induction and Mentoring Programs for Beginning Teachers: A Critical Review of the Research. *Review of Education Research*, 81(2), 201-233.
- Kraft, M. A., Blazar, D., & Hogan, D. (2018). The Effect of Teacher Coaching on Instruction and Achievement: A Meta-Analysis of the Causal Evidence. *Review of Educational Research*, 88(4), 547–588. Retrieved from <https://doi.org/10.3102/0034654318759268>
- Kuhfeld, M., Soland, J., Tarasawa, B., Johnson, A., Ruzek, E. & Liu, J. (2020). *Projecting the potential impacts of COVID-19 school closures on academic achievement*. EdWorkingPaper: 20-226. Annenberg Institute at Brown University. Retrieved from <https://doi.org/10.26300/cdrv-yw05>



- Lawless, K. A., & Pellegrino, J. W. (2007). Professional Development in Integrating Technology Into Teaching and Learning: Knowns, Unknowns, and Ways to Pursue Better Questions and Answers. *Review of Educational Research*. Retrieved from <https://doi.org/10.3102/0034654307309921>
- Marsh, J. A., McCombs, J. S., & Martorell, F. (2009). How Instructional Coaches Support Data-Driven Decision Making: Policy Implementation and Effects in Florida Middle Schools. *Educational Policy*. Retrieved from <https://doi.org/10.1177/0895904809341467>
- O'Keefe, B. (2017, Dec). *Primetime for Coaching: Improving Instructional Coaching*. Sudbury, MA: Bellwether Education Partners. Retrieved from https://bellwethereducation.org/sites/default/files/Bellwether_ECECoaching_GHS_Final.pdf
- Pascarella, J. (2020, April 9). What Happens to Student-Teachers Now? A Guide for Teachers - Education Week. *Education Week*. Retrieved from <https://www.edweek.org/ew/articles/2020/04/09/what-happens-to-student-teachers-now-a-guide.html>
- Rauf, D. S. (2020, April 22). How Districts Are Helping Teachers Get Better at Tech Under Coronavirus—Education Week. *Education Week*. Retrieved from <https://www.edweek.org/ew/articles/2020/04/22/how-districts-are-helping-teachers-get-better.html?cmp=eml-enl-eu-news1&M=59534644&U=1556406&UUID=85bf3290dc4978b68170d37c4c74c818>
- Reich, J., Buttner, C. J., Fang, A., Hillaire, G., Hirsch, K., Larke, L., Littenberg-Tobias, J., Moussapour, R., Napier, A., Thompson, M., & Slama, R. (2020). Retrieved from <https://edarxiv.org/437e2>
- Rice, J. K. (2013). Learning from Experience? Evidence on the Impact and Distribution of Teacher Experience and the Implications for Teacher Policy. *Education Finance and Policy*, 8(3), 332–348. Retrieved from https://doi.org/10.1162/EDFP_a_00099
- Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, Schools, and Academic Achievement. *Econometrica*, 73(2), 417–458.
- Ronfeldt, M. (2012). Where Should Student Teachers Learn to Teach? Effects of Field Placement School Characteristics on Teacher Retention and Effectiveness. *Educational Evaluation and Policy Analysis*, 34(1), 3–26. Retrieved from <https://doi.org/10.3102/0162373711420865>
- Ronfeldt, M., Brockman, S. L., & Campbell, S. L. (2018). Does Cooperating Teachers' Instructional Effectiveness Improve Preservice Teachers' Future Performance? *Educational Researcher*, 47(7), 405–418. Retrieved from <https://doi.org/10.3102/0013189X18782906>
- Ronfeldt, M., & Reininger, M. (2012). More or Better Student Teaching? *Teaching and Teacher Education*, 28(8), 1091–1106. Retrieved from <https://doi.org/10.1016/j.tate.2012.06.003>
- Roza, M. (2020). What Will the Financial Turmoil Mean for Public Education?: Part 2. Webinar retrieved from <https://edunomicslab.org/wp-content/uploads/2020/04/Financial-turmoil-Part-2-FINAL.pdf>. Georgetown University: Edunomics Lab.



- Saenz-Armstrong, P. (2020, April 16). Student Teaching and Initial Licensure in the Times of Corona. *National Council on Teacher Quality (NCTQ)*. Retrieved from <https://www.nctq.org/blog/Student-teaching-and-initial-licensure-in-the-times-of-coronavirus>
- USAFacts (April 2020). More than 9 million children lack internet access at home for online learning. Retrieved from <https://usafacts.org/articles/internet-access-students-at-home/>.
- US Prep. (2020). *Shifting the Clinical Experience Using Virtual Formats*. Retrieved from <https://docs.google.com/document/d/1VRP8V48mvipufRiPGnqqeqNNxcjUd33jwUXKI8RvISQ/edit#>
- Woulfin, S. L., & Rigby, J. G. (2017). Coaching for Coherence: How Instructional Coaches Lead Change in the Evaluation Era. *Educational Researcher*, 46(6), 323–328. Retrieved from <https://doi.org/10.3102/0013189X17725525>

